### (19) World Intellectual Property Organization International Bureau



## | 1920| 1920| 1930 | 1940 | 1940 | 1940 | 1940 | 1940 | 1940 | 1940 | 1940 | 1940 | 1940 | 1940 | 1940 | 1940 |

# (43) International Publication Date 22 May 2003 (22.05.2003)

**PCT** 

# (10) International Publication Number WO 03/042486 A3

(51) International Patent Classification7: E21B 43/10

(21) International Application Number: PCT/US02/36157

(22) International Filing Date:

12 November 2002 (12.11.2002)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

, i to i ti, Datar		
60/338,996	12 November 2001 (12.11.2001)	US
60/339.013	12 November 2001 (12.11.2001)	US
60/363,829	13 March 2002 (13.03.2002)	US
60/387,961	12 June 2002 (12.06.2002)	US

(71) Applicant (for all designated States except US): ENVENTURE GLOBAL TECHNOLOGY [US/US]; 16200 A. Park Row, Houston, TX 77084 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): RING, Lev [RU/US]; 14126 Heatherhill Place, Houston, TX 77077 (US). WATSON, Brock [US/US]; 2535 Marsh Lane #1004, Carrollton, TX 75006 (US). WADDELL, Kevin, K. [US/US]; 11007 Sprucedale Court, Houston, TX 77070 (US). BRISCO, David, Paul [US/US]; 405 Westridge Drive, Duncan, OK 73533 (US).

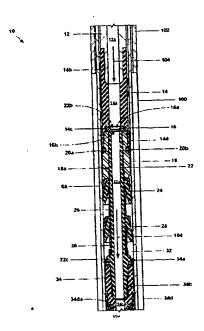
- (74) Agents: MATTINGLY, Todd et al.: Haynes and Boone. ILP, Suite 4300, 1000 Louisiana Street, Houston, TX 77002-5012 (US).
- (81) Designated States inationall: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FL, GB, GD, GE, GH, GM, HR, HU, ID, H., IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SL, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States tregional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW). Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, FT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

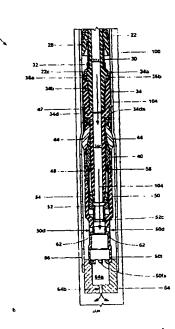
#### Declaration under Rule 4.17:

of inventorship (Rule 4.17(iv)) for US only

[Continued on next page]

(54) Title: COLLAPSIBLE EXPANSION CONE





(57) Abstract: An apparatus (10) for radially expanding and plastically deforming an expandable tubular member (66) includes a collapsible cone (44).

O 03/042486 A3

#### 

#### Published:

with international search report before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

 $\textbf{(88)} \ \ \textbf{Date of publication of the international search report:}$ 

27 November 2003

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/36157

A. CLASSIFICATION OF SUBJECT MATTER  IPC(7) : E21B 43/10  US CL : 166/207,217,382  According to International Patent Classification (IPC) or to both national classification and IPC  B. FIELDS SEARCHED  Minimum documentation searched (classification system followed by classification symbols)  U.S.: 166/121,207,212,216,217,382,387				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST: (expan\$4 with (tub\$5 pip\$3 casing\$1 conduit\$1)), (expander\$1 or (expan\$4 with cone\$1))				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category *	Citation of document, with indication, where ap	propriate, of the relevant passages	Relevant to claim No.	
X	US 3,691,624 A (KINLEY) 19 September 1972 (19.0	20, 23		
A	especially Figs. 1-3 and cols. 3-4. US 3,631,926 A (YOUNG) 04 January 1972 (04.01.) Fig. 1.	24-27		
Further	documents are listed in the continuation of Box C.	See patent family annex.		
Special categories of cited documents:     "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the				
"A" document defining the general state of the art which is not considered to be of particular relevance		"X" principle or theory underlying the invertible of particular relevance; the c	ation laimed invention cannot be	
"E" earlier at	optication or patent published on or after the international filing date	considered novel or cannot be consider when the document is taken alone	ed to involve an inventive step	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means		considered to involve an inventive step combined with one or more other such	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	
<b>(</b> ,		"&" document member of the same patent family		
Date of the actual completion of the international search  Date of mailing of the international search report			1 4	
02 January 2003 (02.01.2003)		<b>29</b> SEP	2003	
Name and mailing address of the ISA/US  Au		Authorized officer	110	
Box	numissioner of Patents and Trademarks  R PCT	Zaliya N. Warker !!		
Washington, D.C. 20231				
Facsimile N	Facsimile No. (703)305-3230 Telephone No. (703) 308-2168			

Form PCT/ISA/210 (second sheet) (July 1998)